**In the Claims**

1. (Currently Amended) A method of forming semiconductor circuitry, comprising:

providing a monocrystalline silicon substrate;

forming a mask which covers a first portion of the substrate and leaves a second portion uncovered;

forming a recess in the uncovered portion;

after forming the recess, providing an insulative material spacer along a sidewall of the recess;

at least partially filling the recess with a semiconductive material that comprises at least 1 atomic percent of an element other than silicon, the providing step being performed before at least partially filling the recess with the semiconductive material, wherein the at least partially filling the recess with the semiconductive material comprises providing the semiconductive material along the insulative material spacer;

removing the mask;

forming a first semiconductor circuit component over the first portion of the substrate; and

forming a second semiconductor circuit component over the semiconductive material that at least partially fills the recess.

2. (Withdrawn) The method of claim 1 wherein the substrate comprises a monocrystalline silicon wafer, and wherein the recess is formed within the monocrystalline silicon of the wafer.

3. (Original) The method of claim 1 wherein the substrate comprises a monocrystalline silicon mass over an insulative material, and wherein the recess is formed within the monocrystalline silicon mass.

4. (Withdrawn) The method of claim 1 wherein the substrate comprises a bulk monocrystalline silicon structure, an insulative material over the bulk monocrystalline structure, and a monocrystalline silicon mass over the insulative material, and wherein the recess is formed through the monocrystalline silicon mass and to the insulative material.

5. (Withdrawn) The method of claim 1 wherein the substrate comprises a bulk monocrystalline silicon structure, an insulative material over the bulk monocrystalline structure, and a monocrystalline silicon mass over the insulative material, and wherein the recess is formed through the monocrystalline silicon mass and insulative material, and to the bulk monocrystalline structure.

6. (Original) The method of claim 1 wherein the semiconductive material that at least partially fills the recess comprises a III/V compound semiconductive material.

7. (Original) The method of claim 1 wherein the semiconductive material that at least partially fills the recess comprises silicon and at least 1% carbon.

8. (Original) The method of claim 1 wherein the semiconductive material that at least partially fills the recess consists essentially of silicon and at least 1% carbon.

9. (Original) The method of claim 1 wherein the semiconductive material that at least partially fills the recess consists of silicon and at least 1% carbon.

10. (Original) The method of claim 1 wherein the semiconductive material that at least partially fills the recess consists essentially of a III/V compound semiconductive material.

11. (Original) The method of claim 1 wherein the semiconductive material that at least partially fills the recess comprises Si and Ge, with the Ge being present to an atomic concentration of from about 1% to about 20%.

12. (Original) The method of claim 1 wherein the semiconductive material that at least partially fills the recess consists essentially of Si and Ge, with the Ge being present to an atomic concentration of from about 1% to about 20%.

13. (Cancelled)

14. (Currently Amended) The method of claim ~~13~~ 1 wherein the insulative material comprises silicon nitride.

15. (Currently Amended) The method of claim ~~13~~ 1 wherein the insulative material comprises silicon dioxide.

16. (Currently Amended) A method of forming semiconductor circuitry, comprising:

providing a substrate comprising a first monocrystalline material, an insulative layer over the first monocrystalline material, and a second monocrystalline material over the insulative layer and spaced from the first monocrystalline material by at least the insulative layer; the second monocrystalline material consisting essentially of a first element;

forming a mask to cover a first portion of the second monocrystalline material, while leaving a second portion uncovered;

removing at least some of the uncovered portion to form a recess;

after forming the recess, providing an insulative material spacer along a sidewall of the recess;

at least partially filling the recess with a semiconductive material that comprises at least 1 atomic percent of an element other than the first element, the providing step being performed before at least partially filling the recess with the semiconductive material, wherein the at least partially filling the recess with the semiconductive material comprises providing the semiconductive material along the insulative material spacer;

removing the mask;

forming a first semiconductor circuit component over the first portion of the second monocrystalline material; and

forming a second semiconductor circuit component over the semiconductive material that at least partially fills the recess.

17. (Original) The method of claim 16 wherein the first and second monocrystalline materials consist essentially of silicon.

18. (Original) The method of claim 16 wherein the first and second monocrystalline materials consist essentially of silicon, and wherein the insulative layer consists essentially of silicon dioxide.

19. (Original) The method of claim 16 wherein the mask comprises a layer consisting essentially of silicon nitride over a layer consisting essentially of silicon dioxide.

20. (Original) The method of claim 16 wherein the semiconductive material that at least partially fills the recess comprises silicon and at least 1% carbon.

21. (Original) The method of claim 16 wherein the semiconductive material that at least partially fills the recess consists essentially of silicon and at least 1% carbon.

22. (Original) The method of claim 16 wherein the semiconductive material that at least partially fills the recess consists of silicon and at least 1% carbon.

23. (Original) The method of claim 16 wherein the semiconductive material that at least partially fills the recess comprises a III/V compound semiconductive material.

24. (Original) The method of claim 16 wherein the semiconductive material that at least partially fills the recess consists essentially of a III/V compound semiconductive material.

25. (Original) The method of claim 16 wherein the semiconductive material that at least partially fills the recess comprises Si and Ge, with the Ge being present to an atomic concentration of from about 1% to about 20%.

26. (Original) The method of claim 16 wherein the semiconductive material that at least partially fills the recess consists essentially of Si and Ge, with the Ge being present to an atomic concentration of from about 1% to about 20%.

27. (Original) The method of claim 16 wherein the semiconductive material that at least partially fills the recess consists essentially of Si and Ge, with the Ge being present to an atomic concentration of from about 1% to about 20%; the method further comprising exposing the semiconductive material to a laser to anneal the Si and Ge of the semiconductive material.

28. (Original) The method of claim 27 wherein the anneal comprises maintaining the semiconductive material at a temperature of from about 800°C to about 1100°C for a time of from about 20 seconds to about 5 minutes, and exposing the semiconductive material to laser light having a wavelength which interacts with one or more components of the semiconductive material.

29. (Original) The method of claim 16 wherein the semiconductive material entirely fills the recess; wherein the semiconductive material consists essentially of Si and Ge, with the Ge being present to an atomic concentration of from about 1% to about 20%; and the method further comprising:

chemical-mechanical polishing the semiconductive material to form a planarized surface which extends across the semiconductive material and mask;

after the chemical-mechanical polishing, exposing the semiconductive material to a laser to anneal the Si and Ge of the semiconductive material; and

the removing the mask occurring after the anneal.

30. (Original) The method of claim 29 wherein, after the removal of the mask, the semiconductive material extends above an uppermost surface of the first portion of the second monocrystalline substrate by a distance of from about 50Å to about 200Å.

31-56. (Cancelled)

Please add the following new claims:

57. (New) A method of forming semiconductor circuitry, comprising:

providing a monocrystalline silicon substrate;

forming a mask which covers a first portion of the substrate and leaves a second portion uncovered;

forming a recess in the uncovered portion;

after forming the recess, providing an insulative material spacer along a sidewall of the recess;

at least partially filling the recess with a semiconductive material that comprises at least 1 atomic percent of an element other than silicon, the providing step being performed before at least partially filling the recess with the semiconductive material, wherein the at least partially filling the recess with the semiconductive material comprises providing the semiconductive material along the insulative material spacer;

removing the mask;

forming a first semiconductor circuit component over the first portion of the substrate; and

forming a second semiconductor circuit component over the semiconductive material that at least partially fills the recess, wherein the semiconductive material comprises a III/V compound semiconductive material.

58. (New) A method of forming semiconductor circuitry, comprising:

providing a monocrystalline silicon substrate;

forming a mask which covers a first portion of the substrate and leaves a second portion uncovered;

forming a recess in the uncovered portion;

after forming the recess, providing an insulative material spacer along a sidewall of the recess;

at least partially filling the recess with a semiconductive material that comprises at least 1 atomic percent of an element other than silicon, the providing step being performed before at least partially filling the recess with the semiconductive material, and the at least partially filling the recess with the semiconductive material comprises providing the semiconductive material along the insulative material spacer;

removing the mask;

forming a first semiconductor circuit component over the first portion of the substrate; and

forming a second semiconductor circuit component over the semiconductive material that at least partially fills the recess, wherein the semiconductive material comprises silicon and at least 1% carbon.

59. (New) A method of forming semiconductor circuitry, comprising:

providing a monocrystalline silicon substrate;

forming a mask which covers a first portion of the substrate and leaves a second portion uncovered;

forming a recess in the uncovered portion;

at least partially filling the recess with a semiconductive material that comprises at least 1 atomic percent of an element other than silicon;

removing the mask;

forming a first semiconductor device component over the first portion of the substrate; and

forming a second semiconductor circuit component, that is different from the first semiconductor device component, over the semiconductive material that at least partially fills the recess, wherein the first semiconductor device is incorporated into a DRAM array, and the second semiconductor device is incorporated into logic circuitry corresponding to a portion of circuitry formed peripheral to the DRAM array.

60. (New) A method of forming semiconductor circuitry, comprising:

providing a monocrystalline silicon substrate;

forming a mask which covers a first portion of the substrate and leaves a second portion uncovered;

forming a recess in the uncovered portion;

at least partially filling the recess with a semiconductive material that comprises at least 1 atomic percent of an element other than silicon;

removing the mask;

forming a first semiconductor circuit component over the first portion of the substrate; and

forming a second semiconductor circuit component over the semiconductive material that at least partially fills the recess, wherein the semiconductive material comprises silicon and at least 1% carbon.